

# Compact Modular Recloser (CMR)

Intelligent. Compact. Self-powered by voltage.

siemens.com/compact-recloser

For greater flexibility, utilities can choose between pre-configured options as a drop-in alternative to a traditional hydraulic recloser or to self-configure the devices to take advantage of advanced protection, measurement and logging features.

### Leading the way

Superior ratings up to 38 kV and unique self-powering via line voltage put the CMR at the forefront of the single-phase auto-recloser market. It presents a quantum leap in technology for cost effectively improving the reliability of overhead medium voltage networks. Featuring a fully insulated housing in a compact design, the lightweight device (<25 kg) permits easy installation and fast commissioning. An intuitive interface, wireless connectivity and SCADA integration capability ensure a high degree of user convenience and flexibility. The comprehensive rating options and practical design of the CMR enable unrestricted deployment onto both urban and rural networks. By eliminating the need for regular maintenance and utilising line voltage as power supply, this new generation of single-phase auto-recloser addresses all common problems of obsolete hydraulic reclosers.

### **Benefits**



### **Key Features**

#### Fully integrated self-powered system:

- Power supply using line voltage
  Rechargeable battery for back-up power
- Magnetic actuated vacuum interrupter
- Fully insulated design for improved operator safety
- Integrated protection relay and controller
- · Flexible mounting options

#### Intelligent

- Wireless connectivity
- Simple and intuitive
- configuration tools
- GPS time reference
- SCADA capability (future)
- Voltage and current measurement

- Fault passage indication (FPI)
- Comprehensive event log
- Full range of TCC curves

#### Reliable and maintenance free

The auto-recloser is suitable for all sites, even those with inconsistent or no line current. Featuring fully configurable protection and four operations in a sequence, the unit is the ideal solution for sectioning faults on long rural distribution lines.

Unlike hydraulic reclosers, which need removal to be serviced and maintained regularly, the CMR switch unit has no need of periodic inspection and maintenance. It is designed to deliver a 25-year uninterrupted service life<sup>(a)</sup>.

## **Compact Recloser Ratings**

### Type tested according to IEC 62271-111 / IEEE C37.60

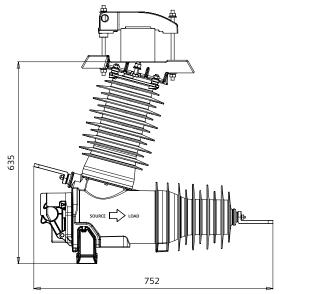
Switch Unit Parameters	Unit	Rating		Rating			
Rated voltage	kV	kV		up to 27 kV		38	
Rated frequency f <sub>r</sub>	Hz		50/60	50/60		50/60	
Rated continuous current <i>I<sub>r</sub></i>	А		630	630		630	
Rated short-time withstand current $I_k$	kA		12.5	12.5		6.3	
Rated peak-withstand current <i>Ip</i>	kA	kA		32.5		16.4	
Rated duration of short circuit $t_k$	S	S		3		3	
Rated symmetrical interrupting current I <sub>sc</sub>	kA	A		12.5		6.3	
Rated symmetrical fault-making current	kA	:A		12.5		6.3	
Rated operating sequence				0 – 0.3s – CO – 2s – CO – 2s – CO		0 – 0.3s – CO – 2s – CO – 2s – CO	
Opening/closing times	ms		<20 ms	<20 ms		<20 ms	
Clearing time	ms		<50 ms	<50 ms		<50 ms	
Rated line-charging interrupting current	А		5	5		5	
Rated cable-charging interrupting current	А		25	25		40	
Minimum number of operations at rated short-circuit current			70	70		240	
Minimum number of load-break operations at rated current/mechanical operations			10,000		10,000		
IP rating			67		67		
Ratings Description	Unit	Model <sup>(b)</sup>					
Rated maximum voltage (P-P) U <sub>r</sub>	kV	12	17.5	27	27	38	
Rated power-frequency withstand – dry $U_d$	kV	28	50	60	60	70	
Rated impulse-withstand voltage Up	kV	95	110	125	150	170	
Minimum system voltage for operation (P-P)	kV	7	10	15.5	15.5	20	
Service Environment					Rating		
Operating temperature range		-40 <sup>(c)</sup> to +55°C				+55°C	
Humidity		0 to 100%					
Maximum altitude		4,000m <sup>(d)</sup>					
Pollution class		Very Heavy					

(a) Excludes routine battery replacements every eight years.

(b) Correct model must be selected for the applicable system voltage (27kV model cannot be used on a 12kV network).

(c) Reclose intervals must be extended at temperatures below -35°C.

(d) De-rating required above 1,000m.



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Dimensions are in millimetres

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